

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Chikara MURAKATA et al. **Confirmation No. 8988**  
Group Art Unit: unknown  
Serial No. : 10/553,222  
(National Stage of PCT/JP2004/005489)  
Examiner: unknown  
Filed : October 17, 2005 (I.A. Filed: April 16, 2004)  
For : MITOTIC KINESIN INHIBITOR

**INFORMATION DISCLOSURE STATEMENT**

Commissioner of Patents  
U.S. Patent and Trademark Office  
Customer Service Window, Mail Stop Amendment  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Sir:

Pursuant to 37 C.F.R. § 1.56 and 37 C.F.R. §§ 1.97-1.98, Applicants hereby direct the Examiner's attention to the following documents cited in the International Search Report for International Application PCT/JP2004/005489 of which the above-referenced application is a National Stage:

- (1) Schenone, S., et al. "3-Arylsulphonyl-5-arylamino-1,3,4-thiadiazol-2(3H)ones as Anti-inflammatory and Analgesic Agents", Bioorganic and Medicinal Chemistry, 9, 2001, pp. 2149-2153;
- (2) Bhalla, M., et al. "Benzopyran-2-one derivatives: anti-inflammatory, analgesic and antiproteolytic agents" European Journal of Medicinal Chemistry, 29, 1994, pp. 713-717;
- (3) JP 62-53976 A, March 9, 1987; Applicants note that this document is also cited and discussed at page 2, line 25 of the present application;

- (4) EP 0 217 519 A1, April 8, 1987; Applicants note that this document is a family member of document (3);
- (5) U.S. Patent No. 4,927,822 (BROWN et al.), May 22, 1990; Applicants note that this document is a family member of documents (3) and (4);
- (6) U.S. Patent No. 4,338,449 (TAO et al.), July 6, 1982;
- (7) WO 03/051854 A1, June 26, 2003;
- (8) EP 1 454 903 A1, September 8, 2004; Applicants note that this document is a family member of document (7);
- (9) U.S. Patent Application Publication No. 2006/0074113 A1 (MURAKATA et al.), April 6, 2006; Applicants note that this document is copending and commonly assigned to the above-referenced application, a family member of documents (7) and (8), and the National Stage of International Application PCT/JP2002/012961.

Applicants further direct the Examiner's attention to the following documents cited and discussed in the present application:

- (10) Blangy, A., et al., "Phosphorylation by p34<sup>cdc2</sup> Regulates Spindle Association of Human Eg5, a Kinesin-Related Motor Essential for Bipolar Spindle Formation In Vivo", Cell, vol. 83, 1995, pp. 1159-1169; Applicants note that this document is cited and discussed at page 1, lines 29 and 33 and at page 64, lines 10 and 16 of the present application;
- (11) Kapoor, T. M., et al., "Probing Spindle Assembly Mechanism with Monastrol, a Small Molecule Inhibitor of the Mitotic Kinesin, Eg5", The

Journal of Cell Biology, vol. 150, 2000, pp.975-988; Applicants note that this document is cited and discussed at page 1, line 29 of the present application;

- (12) Kapoor, T. M., et al., "Allele-specific activators and inhibitors for kinesin" Proc. Natl. Acad. Sci. USA, vol. 96, 1999, pp. 9106-9111; Applicants note that this document is cited and discussed at page 2, line 7 of the present application;

- (13) Lockhart, A. et al., "Kinetics and Motility of the Eg5 Microtubule Motor", Biochemistry, vol. 35, 1999. pp.2365-2373; Applicants note that this document is cited and discussed at page 2, line 7 and at page 65, line 13 of the present application;

- (14) Turner, J., et al., "Crystal Structure of the Mitotic Spindle Kinesin Eg5 Reveals a Novel Conformation of the Neck-linker", The Journal of Biological Chemistry, vol. 276, 2001, pp. 25496-25502; Applicants note that this document is cited and discussed at page 2, line 4 of the present application;

- (15) Maliga, Z. et al., "Evidence that Monastrol Is an Allosteric Inhibitor of the Mitotic Kinesin Eg5", Chemistry and Biology, vol. 9, 2002, pp.989-996; Applicants note that this document is cited and discussed at page 2, line 4 of the present application;

- (16) Mandelkow, E, et al., "Kinesin motors and disease", Trends in Cell Biology, vol. 12, 2002, pp. 585-591; Applicants note that this document is cited and discussed at page 2, line 13 of the present application;

- (17) Mayer, T. U., et al., "Small Molecule Inhibitor of Mitotic Spindle Bipolarity Identified in a Phenotype-Based Screen", Science, vol. 286, 1999, pp. 971-974; Applicants note that this document is cited and discussed at page 2, line 16 and page 64, line 10 of the present application;
- (18) Hoque, T., et al., "Synthesis of Some 5-spiro-4-acetyl-2-(Acetylamino)- $\Delta^2$ -1,3,4-Thiadiazoline from Ketone Thiosemicarbazones", Journal of the Bangladesh Chemical Society, vol. 5 (2), 1992, pp. 127-132; Applicants note that this document is cited and discussed at page 2, line 25 and at page 23, line 10;
- (19) WO 01/98278 A1, December 27, 2001; Applicants note that this document is cited and discussed at page 2, lines 13 and 16 of the present application;
- (20) U.S. Patent Application Publication No. 2005/0187232 A1 (FINER et al.), August 25, 2005; Applicants note that this document is a family member of document (19);
- (21) U.S. Patent Application Publication No. 2004/0254203 A1 (FINER et al.), December 16, 2004; Applicants note that this document is a family member of documents (19) and (20);
- (22) U.S. Patent Application Publication No. 2004/0023996 A1 (FINER et al.), February 5, 2004; Applicants note that this document is a family member of documents (19)-(21);

- (23) U.S. Patent No. 6,831,085 B1 (BERGNES et al.), December 14, 2004; Applicants note that this document is a family member of documents (19)-(22);
- (24) U.S. Patent No. 6,630,479 B1 (FINER et al.), October 7, 2003; Applicants note that this document is a family member of documents (19)-(23);
- (25) U.S. Patent No. 6,562,831 B1 (FINER et al.), May 13, 2003; Applicants note that this document is a family member of documents (19)-(24);
- (26) U.S. Patent No. 6,545,004 B1 (FINER et al.), April 8, 2003; Applicants note that this document is a family member of documents (19)-(25);
- (27) WO 02/056880 A1, July 25, 2002; Applicants note that this document is cited and discussed at page 2, lines 13 and 17 of the present application;
- (28) U.S. Patent Application Publication No. 2004/0132830 A1 (FINER et al.), July 8, 2004; Applicants note that this document is a family member of document (27);
- (29) WO 02/057244 A1, July 25, 2002; Applicants note that this document is cited and discussed at page 2, lines 13 and 17 of the present application;
- (30) U.S. Patent Application Publication No. 2004/0132719 A1 (FINER et al.), July 8, 2004; Applicants note that this document is a family member of document (29);

- (31) U.S. Patent Application Publication No. 2006/0014736 A1 (FINER et al.); January 19, 2006; Applicants note that this document is a family member of documents (29) and (30);
- (32) WO 02/079149 A2, October 10, 2002; Applicants note that this document is cited and discussed at page 2, line 18 of the present application;
- (33) U.S. Patent Application Publication No. 2002/0143026 A1 (LOMBARDO et al.), October 3, 2002; Applicants note that this document is a family member of document (32);
- (34) U.S. Patent Application Publication No. 2002/0165240 A1 (KIMBALL et al.), November 7, 2002; Applicants note that this document is a family member of documents (32) and (33);
- (35) U.S. Patent Application Publication No. 2003/0008888 A1 (KIMBALL et al.), January 9, 2003; Applicants note that this document is a family member of documents (32)-(34);
- (36) WO 02/079169 A1, October 10, 2002; Applicants note that this document is cited at page 2, line 18 of the present application; Applicants also note that this document is a family member of documents (32)-(35);
- (37) WO 03/079973 A2, October 2, 2003; Applicants note that this document is cited and discussed at page 2, line 19 of the present application;

- (38) U.S. Patent Application Publication No. 2005/0119484 A1 (BRESLIN et al.), June 2, 2005; Applicants note that this document is a family member of document (37);
- (39) JP 2000-229959 A, August 22, 2000, accompanied by an English language abstract thereof (provided by Patent Abstracts of Japan); Applicants note that this document is cited and discussed at page 2, line 22 of the present application;
- (40) WO 01/56994 A1, August 9, 2001; Applicants note that this document is cited and discussed at page 2, line 22 of the present application;
- (41) WO 93/22311 A1, November 11, 1993; Applicants note that this document is cited and discussed at page 2, line 24 of the present application;
- (42) Kubota, S., et al. "Synthesis of 4-Acyl-2-(acylamino)- $\Delta^2$ -1,3,4-thiadiazolines and 4-Acyl-2-amino- $\Delta^2$ -1,3,4-thiadiazolines by Acylation of Thiosemicarbazones" J. Org. Chem., vol. 45, No. 8, 1980, pp. 1473-1477; Applicants note that this document is cited and discussed at page 23, line 16 of the present application;
- (43) DD 243 930 A1, March 18, 1987; Applicants note that this document is cited and discussed at page 23, line 16 of the present application;
- (44) Tao, E.V.P., et al., J. Heterocyclic Chem., Vol. 21, 1984, pp. 599-601; Applicants note that this document is cited on page 22, line 26 of the present application;
- (45) Huang, T. B., et al. "Reaction of Schiff Base of Thiohydrazines with  $P(NR_2)_3$ " Phosphorus, Sulfur & Silicon, vol. 122, pp. 307-312 (1997);

Applicants note that this document is cited and discussed at page 27, line 13 and page 28, line 14 of the present application.

Applicants further direct the Examiner's attention to the following copending and commonly assigned U.S. application:

- (46) U.S. Serial No. 10/560,230, filed December 9, 2005 and entitled "THIADIAZOLINE DERIVATIVE"; Applicants note that this document is a national stage of International Application PCT/JP2004/008375.

Furthermore, Applicants direct the Examiner's attention to the information of record in the above-listed copending and commonly assigned documents (9) and (46):

- (47) Kubota, S., et al. "Novel Rearrangement of 3-acyl-5-acylamino-2,3-dihydro-1,3,4-thiadiazole 1-oxides into 1,3,4-oxadiazoles" Heterocycles, vol. 24, No. 1, 1986, pp. 21-24;
- (48) Kubota, S., et al. "Stereoselective S-Oxidation of 5-Substituted 4-Acetyl-  $\Delta^2$ -1,3,4-thiadiazolines: X-Ray Crystal Structure of 4-Acetyl-2-acetylamino-5-methyl-5-phenyl- $\Delta^2$ -1,3,4-thiadiazoline 1-Oxide" J. Chem. Soc., Chem. Comm., 1982, No. 16, pp. 901-902;
- (49) M.A. KHALIL et al., Arch. Pharm. (Weinheim), Vol. 326, 1993, pp. 489-492;
- (50) A.A. FARGHALY et al., Arch. Pharm. Pharm. Med. Chem., Vol. 333, No. 2-3, 2000, pp. 53-57;

- (51) El-S.M. EL-KHAWASS et al., Alexandria Journal of Pharmaceutical Sciences, Vol. 4, No. 1, 1990, pp. 77-79;
- (52) H.M. MOKHTAR et al., Bull. Pharm. Sci., Assiut University, Vol. 18, Part 2, December 1995, pp. 59-67;
- (53) M.A. KHALIL, Alexandria J. of Pharm. Sciences, Vol. 3, No. 2, 1989, pp. 221-224;
- (54) L.L. AWAD et al., Alexandria J. of Pharm. Sci., Vol. 3, No. 2, 1989, pp. 119-121;
- (55) S.Y. HASSAN et al., J. Saudi Chem. Soc., Vol. 3, No. 2, 1999, pp. 171-176;
- (56) B. SCHULZE et al., Zeitschrift fuer Chemie, Vol. 29, No. 5, 1989, pp. 166-167;
- (57) JP 2000-204077 A, July 25, 2000;
- (58) WO 00/42029 A, July 20, 2000, Applicants note that this document is an English language family member of document (57);
- (59) U.S. Patent No. 6,235,762 B1 (TAKASUGI et al.), May 22, 2001;
- (60) S. KUBOTA et al., Heterocycles, Vol. 4, 1976, pp. 1909-1912;
- (61) A. WENGEL et al., Pestic. Sci., Vol. 30, 1990, pp. 223-233;
- (62) E.E. YCOBA et al., Khim. Geterotsikl. Soedin., Vol. 10, 1994, pp. 1337-1344;
- (63) Y. NAKAYAMA et al., J. Org. Chem., Vol. 49, 1984, pp. 1703-1707;
- (64) E.V. TAO et al., Heterocycles, Vol. 29, 1989, pp. 133-140;
- (65) L. SOMOGYI, Tetrahedron, Vol. 47, 1991, pp. 9305-9316;
- (66) L. SOMOGYI et al., Tetrahedron, Vol. 48, 1992, pp. 9355-9362;

- (67) Khim. Geterotsiki. Soedin, Vol. 12, 1992, pp. 1689-1697;
- (68) S. ANDREAE et al., Journal f. prakt. Chemie., Vol. 328, 1986, Heft 2, pp. 205-214;
- (69) L. SOMOGYI, Liebigs Ann. Chem., 1994, pp. 623-627;
- (70) L. SOMOGYI, Liebigs Ann., 1995, pp. 721-724;
- (71) Z.M. NOFAL et al., Arch. Pharm. Res., Vol. 25, 2002, pp. 250-257;
- (72) S. KABILAN et al., Asian Journal of Chemistry, Vol. 14, 2002, pp. 879-883;
- (73) M.A.M. ALHO et al., ARKIVOC 2000, Vol. 1, pp. 627-640;
- (74) K.N. ZELENIN et al., Chemistry of Heterocyclic Compounds, Vol. 35, 1999, pp. 87-92;
- (75) I.V.U. ZAVEDENII, Khimiya I Khimicheskaya Takhnologiya, Vol. 43, 2000, pp. 64-68;
- (76) N.S. HABIB et al., Alex. J. Pharm. Sci., Vol. 10, 1996, pp. 53-58;
- (77) F.A. ASHOUR et al., Bull. Fac. Pharm. Cairo Univ., Vol. 31, 1993, pp. 381-386;
- (78) M.H. KHAN et al., J. Pesticide Sci., Vol. 19, 1994, pp. 305-308;
- (79) Dokl. Aka. Nauk SSSR, Vol. 296, 1987, pp. 1133-1137;
- (80) Zhurnal Organicheskoi Khimii, 1986, pp. 663-664;
- (81) R.J. KUBAN et al., Cryst. Res. Technol., Vol. 22, 1987, pp. 799-802;
- (82) K.N. THIMMAIAH et al., Inorganica Chimica Acta, Vol. 107, 1985, pp. 1-4;
- (83) U.S. Patent No. 4,346,225 (TAO et al.), August 24, 1982;

- (84) CAS Registry Numbers: 443105-88-2, 443105-83-7, 443105-78-0, 443105-73-5, 443105-64-4, 443105-56-4, 443105-51-9, 443105-46-2, 443105-41-7, 443105-34-8, 442654-91-3, 438540-30-8, 433235-71-3, 432536-58-8, 432518-92-8, 419551-57-8, 405925-79-3, 400833-35-4, 356773-31-4, 356773-12-1, 355435-20-0, 352225-16-2, 332389-28-3, 332389-25-0, 89992-30-3, 356773-98-3, 356773-79-0, 356773-31-4, 356773-13-2, 350581-79-2, 346715-36-4, 332389-27-2, 332389-25-0, 330683-67-5, 330683-65-3, 313558-45-1, 313548-79-7, 313523-91-0, 313523-88-5, 307332-32-7, 307332-31-6, 307332-30-5, 307332-29-2, 307332-28-1, 307332-24-7, 307332-22-5, 300808-92-8, 300719-38-4, 298218-64-1, 296801-28-0, 292066-09-2, 332389-28-3, 332389-25-0, 332389-24-9, 332389-23-8, 296801-28-0, 198069-12-4, 149638-52-8, 149638-50-6, 149638-48-2, 149638-46-0, 149638-44-8, 149638-42-6;
- (85) H. GRAUBAUM et al., Z. Chem., Vol. 26, 1986, pp. 99-100;
- (86) U.S. Patent No. 6,207,690 B1 (URBAN et al.), March 27, 2001;
- (87) U.S. Patent No. 5,814,647 (URBAN et al.), September 29, 1998;  
Applicants note that this document is a family member of document (86);
- (88) Yun DING et al., "Syntheses and Anticancer Activity of Ribonucleoside Analogues Containing Thio-Substituted Five-Membered Heterocyclic Base", Bioorganic and Medicinal Chemistry Letters, Vol. 7, No. 13, pp. 1607-1610 (1997);
- (89) U.S. Patent No. 6,414,121 B1 (WOOD et al.), July 2, 2002.

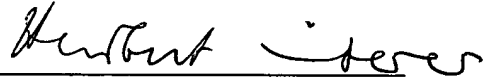
Copies of the above-listed documents (with the exception of U.S. patents and U.S. patent applications), the International Search Reports (in English) for International Applications PCT/JP2002/012961 and PCT/JP2004/008375 and an English language translation of the International Preliminary Report on Patentability for International Application PCT/JP2004/005489 are enclosed together with a completed copy of the Form PTO-1449 listing the above documents (1) through (89). Accordingly, the Examiner is requested to consider these documents and to indicate such consideration by returning a signed and initialed copy of the Form PTO-1449 with the next official communication.

In view to the U.S. Patent and Trademark Office's decision to partially waive the requirements under 37 C.F.R. § 1.98 (a)(2)(i) and (iii), copies of the U.S. patents and U.S. patent applications cited above are not enclosed herewith. However, if any copies are needed, the Examiner is respectfully requested to contact the undersigned.

Applicants note that no fee is required for the consideration of the materials submitted herewith. Nevertheless, the Patent and Trademark Office is hereby authorized to charge Deposit Account No. 19-0089 any fee which may be deemed necessary to ensure consideration of the submitted materials.

If there should be any questions, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,  
Chikara MURAKATA et al.



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FORM PTO-1449		U.S. Department of Commerce Patent and Trademark Office			Atty. Docket No. P28672		Application No. 10/553,222	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use several sheets if necessary)					Applicant <b>Chikara MURAKATA et al.</b>			
					Filing Date October 17, 2005		Group Unknown	
<b>U.S. PATENT DOCUMENTS</b>								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
		4 9 2 7 8 2 2	05/22/90	BROWN et al.				
		4 3 3 8 4 4 9	07/06/82	TAO et al.				
	2006	0 0 7 4 1 1 3	04/06/06	MURAKATA et al.				
<b>FOREIGN PATENT DOCUMENTS</b>								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
	62	- 5 3 9 7 6	03/09/87	JAPAN				
		0 2 1 7 5 1 9	04/08/87	E.P.O				
	03	/ 0 5 1 8 5 4	06/26/03	W.I.P.O				
		1 4 5 4 9 0 3	09/08/04	E.P.O				
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>								
	1	Schenone, S., et al. "3-Arylsulphonyl-5-aryl-amino-1,3,4-thiadiazol-2(3H)ones as Anti-inflammatory and Analgesic Agents", Bioorganic and Medicinal Chemistry, 9, 2001, pp. 2149-2153.						
	2	Bhalla, M., et al. "Benzopyran-2-one derivatives: anti-inflammatory, analgesic and antiproteolytic agents" European Journal of Medicinal Chemistry, 29, 1994, pp. 713-717.						
	3	Blangy, A., et al., "Phosphorylation by p34 <sup>cdc2</sup> Regulates Spindle Association of Human Eg5, a Kinesin-Related Motor Essential for Bipolar Spindle Formation In Vivo", Cell, vol. 83, 1995, pp. 1159-1169.						
	4	Kapoor, T. M., et al., "Probing Spindle Assembly Mechanism with Monastrol, a Small Molecule Inhibitor of the Mitotic Kinesin, Eg5", The Journal of Cell Biology, vol. 150, 2000, pp.975-988.						
	5	Kapoor, T. M., et al., "Allele-specific activators and inhibitors for kinesin" Proc. Natl. Acad. Sci. USA, vol. 96, 1999, pp. 9106-9111.						
	6	Lockhart, A. et al., "Kinetics and Motility of the Eg5 Microtubule Motor", Biochemistry, vol. 35, 1999, pp.2365-2373.						
	7	Turner, J., et al., "Crystal Structure of the Mitotic Spindle Kinesin Eg5 Reveals a Novel Conformation of the Neck-linker", The Journal of Biological Chemistry, vol. 276, 2001, pp. 25496-25502.						
	8	Maliga, Z. et al., "Evidence that Monastrol Is an Allosteric Inhibitor of the Mitotic Kinesin Eg5", Chemistry and Biology, vol. 9, 2002, pp.989-996.						
	10	Mandelkow, E, et al., "Kinesin motors and disease", Trends in Cell Biology, vol. 12, 2002, pp. 585-591.						
	11	Mayer, T. U., et al., "Small Molecule Inhibitor of Mitotic Spindle Bipolarity Identified in a Phenotype-Based Screen", Science, vol. 286, 1999, pp. 971-974.						
	12	Hoque, T., et al., "Synthesis of Some 5-spiro-4-acetyl-2-(Acetylamino)- $\Delta^2$ -1,3,4-Thiadiazoline from Ketone Thiosemicarbazones", Journal of the Bangladesh Chemical Society, vol. 5 (2), 1992, pp. 127-132.						
EXAMINER					DATE CONSIDERED			
*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								

FORM PTO-1449	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. P28672	Application No. 10/553,222
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use several sheets if necessary)		Applicant <b>Chikara MURAKATA et al.</b>	
		Filing Date October 17, 2005	Group Unknown

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	2005	0 1 8 7 2 3 2	08/25/05	FINER et al.			
	2004	0 2 5 4 2 0 3	12/16/04	FINER et al.			
	2004	0 0 2 3 9 9 6	02/05/04	FINER et al.			
		6 8 3 1 0 8 5	12/14/04	BERGNES et al.			
		6 6 3 0 4 7 9	10/07/03	FINER et al.			
		6 5 6 2 8 3 1	05/13/03	FINER et al.			
		6 5 4 5 0 0 4	04/08/03	FINER et al.			
	2004	0 1 3 2 8 3 0	07/08/04	FINER et al.			
	2004	0 1 3 2 7 1 9	07/08/04	FINER et al.			
	2006	0 0 1 4 7 3 6	01/19/06	FINER et al.			
	2002	0 1 4 3 0 2 6	10/03/02	LOMBARDO et al.			
	2002	0 1 6 5 2 4 0	11/07/02	KIMBALL et al.			
	2003	0 0 0 8 8 8 8	01/09/03	KIMBALL et al.			
	2005	0 1 1 9 4 8 4	06/02/05	BRESLIN et al.			

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	01	/ 9 8 2 7 8	12/27/01	W.I.P.O			
	02	/ 0 5 6 8 8 0	07/25/02	W.I.P.O			
	02	/ 0 5 7 2 4 4	07/25/02	W.I.P.O			
	02	/ 0 7 9 1 4 9	10/10/02	W.I.P.O			
	02	/ 0 7 9 1 6 9	10/10/02	W.I.P.O			
	03	/ 0 7 9 9 7 3	10/02/03	W.I.P.O			
	2000	- 2 2 9 9 5 9	08/22/00	JAPAN			
	01	/ 5 6 9 9 4	08/09/01	W.I.P.O			
	93	/ 2 2 3 1 1	11/11/93	W.I.P.O			
		2 4 3 9 3 0	03/18/87	GERMANY			

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

13	English Language abstract of JP 2000-229959.
14	Kubota, S., et al. "Synthesis of 4-Acyl-2-(acylamino)- $\Delta^2$ -1,3,4-thiadiazolines and 4-Acyl-2-amino- $\Delta^2$ -1,3,4-thiadiazolines by Acylation of Thiosemicarbazones" J. Org. Chem., vol. 45, No. 8, 1980, pp. 1473-1477.
15	Tao, E.V.P., et al., J. Heterocyclic Chem., Vol. 21, 1984, pp. 599-601.

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. P28672		Application No. 10/553,222	
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				Filing Date October 17, 2005		Group Unknown	

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		6 2 3 5 7 6 2	05/22/01	TAKASUGI et al.			

FOREIGN PATENT DOCUMENTS							
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	2000	- 2 0 4 0 7 7	07/25/00	JAPAN			
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FORM PTO-1449		U.S. Department of Commerce Patent and Trademark Office		Atty. Docket No. P28672		Application No. 10/553,222	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use several sheets if necessary)				Applicant <b>Chikara MURAKATA et al.</b>			
				Filing Date October 17, 2005		Group Unknown	

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		Filing Date October 17, 2005	Group Unknown

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		5 8 1 4 6 4 7	09/29/98	URBAN et al.			
		6 4 1 4 1 2 1	07/02/02	WOOD et al.			

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